

5KW FM TRANSMITTER

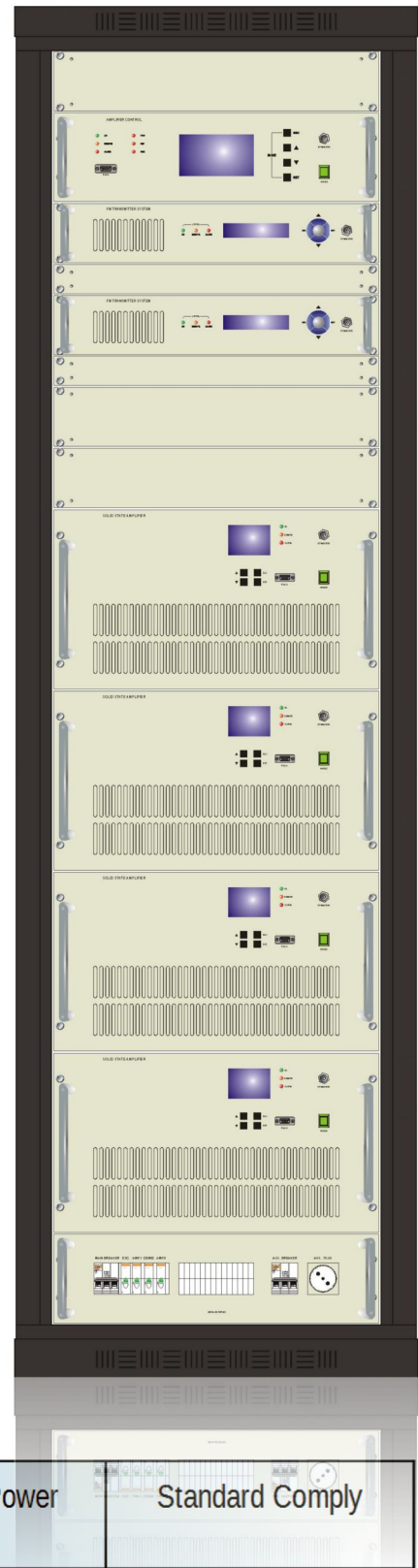
The Broadwind 5kW air cooled FM Transmitter belongs to the High Power VHF products family of FM Radio Transmitters with fully solid state technology, operating in the Band II / OIRT for FM stereo sound broadcasting.

The equipment is fully compliant with the personnel safety requirements as specified in IEC 215.

The transmitters have been designed to offer to the customer high performances, high reliability and great simplicity in their operation and maintenance procedures.

Key Features

- Broadband frequency synthesizer, without any other tuning or alignment.
- Monophonic & Stereophonic emission, according to the CCIR rec. 450-2 standard
- RDS & SCA subcarriers input capability
- Hi-Fi Quality modulated signal, with low residual noise and distortion.
- Digital Exciter with DDS process up-gradable
- AES-EBU digital interface available as option
- RF Signal free from spurious and harmonic signals
- MOSFET to obtain wide band, reliability and efficiency
- Redundant 4x1,5kW RF power amplifier and power supply
- Hot pluggable any RF power amplifiers
- Dual Drive ; 1+1 ; N+1 Redundancy configuration capability
- High Tolerance mains voltage ($\pm 20\%$) is accepted by the transmitter
- Mains Protection System with Surge Arrester System (optional)
- Control System including fault finding
- Protection Systems including:
 - Block against emission on spurious frequencies
 - Reflected Power
 - Modulation Limiter
- Remote Operation compliant to IEC 864-1 rule (all options are available)
- Air Cooling System fully integrated and outdoor conveyable
- Very low acoustic noise -64dBA
- Compact Design, only one 19" rack 33 unit height is used



Transmitter Model	Band	Frequency	Output Power	Standard Comply
ITC 02-502FH	II	87.50 to 108.00 MHz	5kW	CCIR and FCC

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Common technical specifications for Band I (OIRT) and Band II

RF		TRANSMISSION CHARACTERISTICS	
Class of emission	F3E (Monophonic) F8E (Stereophonic)	Mono operation \pm 75 kHz deviation	
Stereo system	According to C.C.I.R. rec.450-1	Total harmonic distortion	\leq 0.1%
Frequency deviation	\pm 75 kHz nominal	Intermodulation	\leq 60 dB
Frequency control	Built-in Frequency Synthesiser	Signal to noise unweighted	\geq 80 dB
Resolution	10 kHz step	Signal to noise weighted (CCIR 468-3)	\geq 78 dB
programmable		Stereo operation \pm 75 kHz deviation	
Frequency stability	\pm 500 Hz / 6 months	Total harmonic distortion	\leq 0.1%
Output power	\geq 5 kW (adjustable)	Intermodulation	\leq 60 dB
Harmonic emission	\leq 76 dBc	Signal to noise unweighted	\geq 78 dB
Spurious emission	\leq 90 dBc	Signal to noise weighted (CCIR 468-3)	\geq 72 dB
Residual AM noise level	\leq 60 dB	Crosstalk L & R (40 to 15000 Hz)	\geq 50 dB
Synchronous AM	\leq 50 dB	38 kHz subcarrier suppression	\geq 50 dB
RF output impedance	50 Ω ; 1-5/8" EIA	Attenuation above 53 kHz	\geq 50 dB
connector			
		METERING	
		Deviation	meter 100 kHz f.s.
		Output / reflected RF power	meter selectable
PROGRAM INPUT		REMOTE CONTROL	
Mono/Stereo	L & R program input	Parallel interface:	start, stop, standby,
Connector	XLR type	Serial interface:	alarms, status, interlock
Impedance	600 Ω or 5k Ω balanced		RS-232
Level	- 4 to 12 dBm		or others on request
Preemphasis	0; 25; 50 or 75 μ s		(Full control and management)
selectable			
Audio frequency response	40 to 15000 \pm 0.3 dB	GENERAL	
19 kHz suppression	\geq 50 dB	Voltage power supply:	3x380 V AC \pm 15 %
RDS and AUX	Subcarrier program input		3x400 V AC \pm 15 %
Connector	BNC		(other on request)
Impedance	\geq 2 k Ω unbalanced	Frequency:	50 - 60 Hz \pm 5 %
Frequency range	67 to 100 kHz	Temperature operating range:	0 to 45 $^{\circ}$ C
Nominal input level	- 10 dBm (\pm 7.5 kHz deviation)	Altitude:.....	up to 2.500 meters
			(\geq 2.500 m with additional cooling system)
		Power consumption	
		(cooling system included):	\leq 10 kW
		Power factor:	\geq 0.95
		Cooling:	forced air
		Acoustic noise:	\leq 65 dBA
		Dimensions:	602 x 1200 H x 820 mm
		Weight:	380 kg approx.

Design and specifications are subject to change without notice.